

**Protocol
for
Incidental Take Authorization**

Red-Tailed Leafhopper (*Aflexia rubranura*)

Note

If carrying out a given protocol is not feasible, or multiple listed species in a given management area pose conflicts, contact the Bureau of Endangered Resources at 608/264-6057. Staff in BER will work with Integrated Science Services (Research) staff, species experts and managers to establish an acceptable protocol for a given site that will allow for incidental take without further legal Consultation or public notice

A. Status

State Status: Endangered.

USFWS Region 3 Species of Management Concern: Yes

Number of Known Sites in Wisconsin: 34 sites total in the counties of Kenosha, Walworth, Waukesha, Jefferson, Fond du Lac, Dane, Iowa, Columbia, Sauk, Monroe (12 sites at Fort McCoy alone), Green Lake, and Dunn.

Global Range: NE Illinois, southern and western Wisconsin, southern and western Minnesota, NE South Dakota, SE Manitoba, and Manitoulin Island in Lake Huron (Ontario).

B. Habitat

Host plant: Prairie dropseed (*Sporobolus heterolepis*) for both adults and young.

General Habitat Description: Areas of original wet-mesic to dry prairie sod with the host plant present.

C. Life History

Number of generations per year: There is normally just one brood (generation) per

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year in Wisconsin, but two broods per year consistently occur at Chiwaukee Prairie and possibly others sites the extreme southern most part of the state.

Over-wintering stage: As eggs.

Over-wintering location: In the litter, duff, or soil surface (exact location is uncertain). Based on life histories of other leafhoppers, the eggs may very well be inserted into the stems of the host plant, and thus spend the winter there.

Adults active: On single-brood sites: late-July through August. On double-brood sites: mid-June through late July and then again in September.

Single season dispersal ability: At least 500 ft. Nearly all adults are flightless. Occasionally an individual may be fully winged, but whether they are capable of flight and actually do fly is unknown.

Immatures active: On single-brood sites: early June or July. On double-brood sites: mid-May or June and again in August.

II. Management Protocol for Authorized Incidental Take

If the management activity is for the purpose of recovering, maintaining, or improving the grassland, prairie, or savanna ecosystem that includes habitat for red-tailed leafhoppers, then incidental take is allowed if these conditions are followed:

A. Burning

1. If no monitoring of red-tailed leafhopper is occurring, and

- a. If burning in early spring (*see definition*),

Then you may burn up to 2/3 of the site's entire host plant population in any given spring, **as long as**, at least 1/3 of the host plant population remains unburned for at least two consecutive springs, and there is no more than 500 ft separating burned and unburned host plant populations.

- b. If burning at other times of the year,

Then you may burn up to 1/2 of the site's entire host plant population in any given 12 month period, **as long as**, at least 1/3 of the host plant population remains unburned for at least three consecutive growing seasons, and there is no more than 500 ft separating burned and unburned host plant populations.

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2. If monitoring of red-tailed leafhopper is occurring¹,

Then other burn regimes may be employed under consultation with the DNR Bureaus of Endangered Resources and Integrated Science Services.

¹ At least 2 years of baseline monitoring must occur before burning begins, and the monitoring must follow protocol acceptable to the DNR Bureaus of Endangered Resources and Integrated Science Services.

B. Mowing/Haying

1. If no monitoring of red-tailed leafhopper is occurring, and

- a. If mowing/haying once between May 11th and Sept. 30th, and

- 1) If allowing at least 2 years before re-cutting more than 1/2 of the previously cut portion of the host plant population,

- Then you may cut up to 3/4 of the site's entire host plant population at a minimum height of 6 inches above the ground.

- 2) If allowing at least 3 years before re-cutting more than 1/2 of the previously cut portion of the host plant population,

- Then you may cut up to 7/8 of the site's entire host plant population at a minimum height of 6 inches above the ground.

- b. If mowing/haying between Oct. 1st and May 10th,

- Then there are no restraints on the activity.

2. If yearly monitoring of red-tail leafhopper is occurring¹,

Then other cutting regimes may be employed under consultation with the DNR Bureaus of Endangered Resources and Integrated Science Services.

¹ At least 2 years of baseline monitoring must occur before cutting/mowing begins, and the monitoring must follow protocol acceptable to the DNR Bureaus of Endangered Resources and Integrated Science Services.

C. Selective Tree/Brush Cutting

As long as heavy equipment is not used and the host plant is not buried under cut material, there are no restraints on this activity.

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D. Grazing

Allowed only under consultation with the DNR Bureaus of Endangered Resources and Integrated Science Services.

E. Use of Herbicide

As long as prairie dropseed is not being affected, there are no restraints on the use of herbicide.

Presence/Absence Survey Protocol

Personnel conducting the surveys must be adequately trained in the use of sampling techniques and red-tailed leafhopper identification. The training must include field experience.

Sampling period: July 20 to Aug. 22 for likely single brood sites (most of the state). Sept. 5 to Oct. 1 for likely double brood sites (e.g., Chiwaukee Prairie and possibly other locations in extreme

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southern WI).

Weather conditions:

Air temp: 75 to 90 F

Wind speed: depends on sampling method used (see below)

Sky: clear to partly cloudy

Foliage must be dry.

Time of day: 10 am to sunset.

Number of visits per site: Make a minimum of 3 visits in a season, with not less than 4 days between visits.

Sampling effort per site visit: Sample a minimum of 10 prairie dropseed plants, or clusters of plants, for every 20 acres of habitat with dropseed.

Sampling method:

Sweep netting: Wind speed must be below 6 mph. Use 15 to 18 inch dia. sweep nets with 3 to 5 foot long handles. Leafhoppers are sensitive to vibrations and movement, and quickly drop down into the duff when disturbed. Therefore, dropseed plants must be approached quickly, but quietly.

Make just one fast sweep tight across the plant's surface as you quickly step (lung) towards the plant with the net well out in front of you. If you are in a large patch of prairie dropseed, additional sweeps may be made with each long forward step through the patch. Approach target plants with the sun in front of you (i.e., your shadow behind you). Technique is important.

or

Vacuum sampling (modified leaf blower): Wind speed may vary from 0 to 20 mph. Vacuum the surface and down into the duff of prairie dropseed plants. Under ideal weather conditions, the vacuum method is only slightly more effective than the sweep net at finding red-tailed leafhoppers.

However, under windy conditions (even just an occasional gust above 7 mph) and during temperatures either above or below 75 to 90 F, the vacuum is much more effective than the sweep net. Red-tail leafhoppers tend to retreat down into the duff when conditions are too cool, too desiccating (hot and sunny), or too windy.

Specimens should be released after handling, exception for two vouchers per site.

Definitions

Site: Any contiguous patch of prairie vegetation or clusters of patches of prairie vegetation not separated from one another by more than 300 ft. of open (non-brush/tree) cover or by

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more than 20 ft. of dense brush/tree cover. (Note: roads and trails do not constitute barriers to dispersal.) If the area straddles a property line, the different ownerships must be considered different sites, unless red-tailed leafhopper survey/management agreements exist between the owners.

Early Spring:

Any time prior to the 7th day after the first opening of pasque flowers (*Anemone patens*) on the site. If no pasque flowers are on site, the closest population with a slope aspect similar to the site in question may be used.